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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,696	04/05/2001	Mika Raitola	PM 276626	7834

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EXAMINER	
RYMAN, DANIEL J	
ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/762,696	RAITOLA ET AL.	
	Examiner	Art Unit	
	Daniel J. Ryman	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 February 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) *9,13,18,19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 February 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/12/01; 3/12/01*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: on page 8, line 6 "step 418" should be "step 416" in order to match Fig. 4a.

Appropriate correction is required.

Claim Objections

2. Claim 9 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 9 should depend upon claim 5 rather than claim 4.

3. Claim 9 is objected to because of the following informalities: in line 3 "the average" should be "an average" and in line 3 "the adaptive quality" should be "an adaptive quality". Appropriate correction is required.

4. Claims 13, 18, and 19 are objected to because of the following informalities: in line 6 "the method of error" should be "a method of error". Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 12 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which

it is most nearly connected, to make and/or use the invention. Claim 12 contains the limitation "the delay-critical information is circuit-switched information". Claim 1, which claim 12 depends upon, contains the limitation "transmitting packet-switched data". Circuit-switched data cannot simultaneously be packet-switched data since the two switching systems are mutually exclusive. Examiner notes that Applicant may be trying to claim that the delay-critical information was received by the system as circuit-switched information and changed into packets, e.g. telephone system in which packets are used to transmit information between the base and mobile. Since this interpretation, as broadly defined, is covered by Applicant's claim 11, Examiner will not examine claim 12 for the purpose of prior art rejections, but will rely on claim 11 to demonstrate to Applicant the state of the prior art.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 11, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Pasternak et al. (USPN 5,648,969).

9. Regarding claims 1 and 13, Pasternak discloses a method of and radio system for transmitting packet-switched data between a transmitter and a receiver (col. 1, lines 9-21 and col. 1, lines 42-50), in which the connection between the transmitter and the receiver includes at least two logical channels (VPI/VCI), and that one logical channel is used for transmitting delay-critical information (voice), and that the information to be transmitted between the transmitter

and the receiver is located in given transmission units (ATM cells) (Fig. 8 and col. 6, line 60-col. 7, line 11), the method comprising the steps of and the system comprising means for: employing a method of error protection in the transmission of the transmission units (col. 2, lines 9-26 and col. 6, lines 10-22), and employing a different method of error protection when transmitting data and delay-critical information (col. 2, lines 9-26 and col. 6, lines 10-22).

10. Regarding claim 11, referring to claim 1, Pasternak discloses that the delay-critical information is speech information (col. 2, lines 13-15 and col. 5, lines 37-41).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 2-4, 7, and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pasternak et al. (USPN 5,648,969) as applied to claims 1 and 13 above, and further in view of Voith et al. (USPN 5,751,741).

13. Regarding claims 2, 3, 14, and 15, referring to claims 1 and 13, Pasternak discloses as part of signal transmission: channel-coding the transmission unit including data and delay-critical information (col. 2, lines 9-26) where all cells have FEC which is a type of coding; storing the transmission unit in memory (col. 6, line 60-col. 7, line 8); and multiplexing the transmission units including data with the transmission units including delay-critical information (Fig. 11 and col. 7, lines 16-17). Pasternak does not expressly disclose performing adaptation of the transmission rate or interleaving the multiplexed transmission units. Voith teaches, in a

packet communication system, performing adaptation of the transmission rate in order to synchronize a data stream to a particular rate (Fig. 3 and col. 2, lines 61-67) and interleaving the multiplexed transmission units (Fig. 3) where it is implicit that interleaving is performed to spread out errors in the signal stream. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to perform adaptation of the transmission rate in order to synchronize a data streams to a particular rate and to interleave the multiplexed transmission units in order to spread out errors in the signal stream.

14. Regarding claims 4 and 16, referring to claims 1 and 13, Pasternak discloses as part of signal reception: demultiplexing the transmission units including delay-critical information and the transmission units including data separately (Fig. 11 and col. 7, lines 16-17). Pasternak does not expressly disclose performing deinterleaving or performing adaptation of the transmission rate for the received transmission units. Voith teaches, in a packet communication system, performing adaptation of the transmission rate in order to synchronize a data streams to a particular rate (col. 2, lines 61-67 and col. 3, lines 10-22) and deinterleaving the multiplexed transmission units (Fig. 3) where it is implicit that interleaving is performed to spread out errors in the signal stream. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to perform adaptation of the transmission rate in order to synchronize a data streams to a particular rate and to deinterleave the multiplexed transmission units in order to recover an interleaved signal stream.

15. Regarding claim 7, referring to claim 4, Pasternak in view of Voith discloses forming an error check sum, on the basis of which the quality of the unit is checked in the reception (Pasternak: Fig. 8, scrambling and Voith: Fig. 3, CRC-Scrambler).

16. Claims 5, 6, 9, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pasternak et al. (USPN 5,648,969) in view of Voith et al. (USPN 5,751,741) as applied to claims 4 and 16 above, and further in view of Ketseoglou (USPN 6,145,108).

17. Regarding claims 5, 6, and 17, referring to claims 4 and 16, Pasternak in view of Voith discloses having the receiver measuring quality of the received transmission unit on the channels transmitting other than delay-critical information (Pasternak: Fig. 9); checking the quality of each received transmission unit independently of each other (Pasternak: Fig. 9); storing the received transmission units (Pasternak: Fig. 9); and requesting at least one retransmission of the transmission unit on the basis of the quality measurement (Pasternak: col. 2, lines 15-26 and col. 5, lines 41-46). Pasternak in view of Voith does not expressly disclose requesting at least one retransmission of the transmission unit on the basis of the quality measurement until the quality measurement concerning the combined transmission unit composed of the originally transmitted transmission and one or more retransmitted transmission units indicates that a retransmission is not needed, after which the transmission unit is detected. Ketseoglou discloses, in a wireless communication system, requesting at least one retransmission of the transmission unit on the basis of the quality measurement until the quality measurement concerning the combined transmission unit composed of the originally transmitted transmission and one or more retransmitted transmission units indicates that a retransmission is not needed, after which the transmission unit is detected in order to properly receive a unit while minimizing "the number of likely retransmissions necessary to achieve a successful signal being received" (col. 2, line 58-col. 3, line 35 and col. 4, lines 7-42). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to request at least one retransmission of the transmission unit

on the basis of the quality measurement until the quality measurement concerning the combined transmission unit composed of the originally transmitted transmission and one or more retransmitted transmission units indicates that a retransmission is not needed, after which the transmission unit is detected in order to minimize the number of likely retransmissions necessary to achieve a successful signal being received.

18. Regarding claim 9, referring to claim 5, Pasternak in view of Voith in further view of Ketseoglou suggests determining the quality level of the combined transmission unit by comparing the average quality level of transmission units with the adaptive quality threshold (Ketseoglou: col. 4, lines 19-42 and col. 5, lines 6-34).

19. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pasternak et al. (USPN 5,648,969) in view of Voith et al. (USPN 5,751,741) as applied to claim 4 above, and further in view of Newland et al. (USPN 6,104,991).

20. Regarding claim 8, referring to claim 4, Pasternak in view of Voith does not expressly disclose defining the quality of the received transmission unit by forming a bit error ratio of the training sequence of the transmission unit. Newland teaches, in a packet communication system, performing a known quality measurement by measuring the bit error ratio of the training sequence (header) of the transmission unit (col. 9, line 63-col. 10, line 1). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to define the quality of the received transmission unit by forming a bit error ratio of the training sequence of the transmission unit since this is a known quality measurement.

21. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pasternak et al. (USPN 5,648,969) as applied to claim 1 above, and further in view of Bobeck et al. (USPN 6,075,787).

22. Regarding claim 10, referring to claim 1, Pasternak does not expressly disclose that the delay-critical information is control information. Bobeck teaches, in a packet communication system, that it is known to have delay-critical information comprise control information (col. 15, lines 10-29). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the delay-critical information be control information.

23. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pasternak et al. (USPN 5,648,969) as applied to claim 1 above, and further in view of Ketseoglou (USPN 6,145,108).

24. Regarding claims 18 and 19, incorporating the rejection of claims 1 and 13, Pasternak discloses each limitation of claims 18 and 19, as seen in the rejection of claims 1 and 13, except that the wireless system contains base stations and mobile terminals. Ketseoglou teaches, in a wireless communication system, that it is well known to have a base station and mobile stations (col. 2, lines 42-52) where it is implicit that this architecture allows the mobile users to be mobile. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the wireless system contain base stations and mobile terminals in order to allow some of the users to be mobile.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 7:00-4:30 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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